

ABSTRACT

A reactor comprises a reaction zone, optionally containing a catalyst bed, and heat exchange means in operative contact with the reaction zone, e.g. embedded in a catalyst bed, and arranged so as to receive reactants for heat exchange purposes, wherein the heat exchange means is formed from a plurality of superposed metal plates wherein fluid flow channels have been formed, according to a pre-determined pattern, the channel-bearing plates being aligned during superposition to define discrete heat exchange pathways respectively for reactant and working fluids, and the said plates are diffusion bonded together.